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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

ORIGINAL

In the Matter of:

Revision of the Commission's
Rules To Ensure Compatibility
With Enhanced 911 Emergency
Calling Systems

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CC Docket No. 94-102

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REPLY COMMENTS OF
THE PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION AND SUMMARY	1
II. COMPATIBILITY WILL BE ACHIEVED MOST RATIONALLY AND EFFICIENTLY BY DEFERRING TO COLLABORATIVE INDUSTRY PROCESSES RATHER THAN ADOPTING INTRUSIVE TECHNICAL REGULATIONS	4
A. The State of Technology Does not Support Adoption of Design Requirements and Compatibility Deadlines.	4
B. The Proponents of Regulatory Intervention Fail To Demonstrate that Compatibility Is Readily Achievable	7
C. The Commission Should Refer Technical Issues To a Joint Industry/Public Safety Experts Group.	9
III. THE COMMISSION SHOULD ADDRESS FUNDING, PREEMPTION AND LIABILITY ISSUES CONCURRENTLY WITH INDUSTRY RESOLUTION OF TECHNICAL ISSUES	11
IV. CONCLUSION	14

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The Personal Communications Industry Association ("PCIA") respectfully submits its reply comments in the above-captioned proceeding. As discussed herein, the Commission should decline to adopt the mandatory compliance deadlines and design requirements proposed in the Notice, and instead should refer the complex technical issues associated with wireless/E911 compatibility to a joint industry/public safety expert group. While that group is addressing and overcoming the technical challenges, the Commission should develop and implement a rational cost recovery mechanism, preempt inconsistent state and local technical requirements, and extend to wireless service providers the traditional LEC immunity from liability for transmitting 911 calls.

I. INTRODUCTION AND SUMMARY

The record confirms that wireless carriers, equipment manufacturers, and telephone companies share the Commission's goal of maximizing compatibility between wireless services and enhanced 911 ("E911") emergency calling systems. Representatives

of each of these industry sectors joined PCIA in committing to achieve this goal as expeditiously as possible, consistent with technical and economic realities. At the same time, however, these same entities unequivocally criticized the approach to compatibility set forth in the Notice.

The Notice seeks to impose a series of design requirements and compliance deadlines. Without exception, service providers and manufacturers cautioned that the technology to support this inflexible approach is simply unavailable. For many capabilities, such as call priority, provision of call-back number, and use of common channel signalling, it appears that technical and policy issues can be resolved within the next several years. However, with respect to Automatic Location Identification ("ALI"), the industry is just beginning to draft requirements documents, and has yet to develop consensus standards or engage in widespread field-testing of possible technologies. As a result, there is virtually no support from the industry for the proposed three-stage implementation process.

Several public safety organizations nonetheless contended that location technology is already available. Although PCIA certainly concurs in the need to achieve compatibility as quickly as reasonably possible, it respectfully submits that there is no basis for this conclusion. The JEM Report, pointed to by APCO, in fact states that all known ALI technologies are immature and suffer from serious flaws, and that the path to compatibility must be evolutionary. The Driscoll Report, also cited by

proponents of regulatory intervention, contains unsubstantiated claims and fails to recognize that none of the identified technologies has been tested across the variety of air interfaces, architectures, access methods, and applications typical of commercial mobile radio services. Finally, GPS technology, which some of these parties characterize as the solution to ALI, has serious design and cost penalties and is unusable in buildings, tunnels and congested urban environments.

Against this background, adoption of the proposed design requirements and compliance deadlines would be contrary to the public interest. Instead, the Commission should ask expert industry bodies to address and overcome the complex technical challenges to compatibility, subject to a requirement to submit periodic progress reports to the Commission. Specifically, this task should be performed by a Joint Coordination Function ("JCF") which, as detailed herein, will provide a flexible and responsive avenue for expediting compatibility. The JCF can also assure that infrastructure issues, such as the need to upgrade PSAPs to accommodate additional information from wireless service providers, are properly considered when developing compatibility technology.

Concurrent with the consideration of technical issues by the JCF, the Commission should resolve three critical policy issues. First, the Commission must develop a rational, equitable, and competitively neutral cost recovery mechanism, so that no industry segment bears unreasonable burdens. Second, the

Commission should preempt inconsistent state and local regulation of wireless/E911 compatibility in order to assure seamless access by roamers and consistent nationwide technological solutions.

Third, the Commission should extend to wireless services providers the same immunity from liability enjoyed by landline LECs transporting 911 calls.

II. COMPATIBILITY WILL BE ACHIEVED MOST RATIONALLY AND EFFICIENTLY BY DEFERRING TO COLLABORATIVE INDUSTRY PROCESSES RATHER THAN ADOPTING INTRUSIVE TECHNICAL REGULATIONS

A. The State of Technology Does not Support Adoption of Design Requirements and Compatibility Deadlines.

The record conclusively establishes that maximizing compatibility between wireless services and E911 systems will require substantial development of new standards and technology. Virtually without exception, manufacturers and service providers endorsed the requirement to allow wireless service subscribers to access emergency services, but cautioned that additional technical requirements are insupportable at this time. As a result, there is widespread agreement that adoption of inflexible deadlines and mandatory design requirements would be counterproductive.

The technological challenges to compatibility are greatest with respect to ALI, and the record is replete with warnings that the proposed compliance deadlines are unachievable. AT&T, for example, detailed why the location technologies referenced in the Notice (i.e. GPS, Time Difference of Arrival, Angle of Arrival, Received Signal Strength, CDMA Synchronization, KSI's Direction

Finding System) suffer from major shortcomings.¹ Similarly, Ameritech,² Bell Atlantic,³ NYNEX,⁴ Pacific Bell⁵ and US West⁶ all pointed out that because the technology required to implement wireless ALI is not even in the prototype stage, wireless carriers will be unable to meet the proposed implementation schedule.

More specifically, substantial concerns were expressed about each stage of the Commission's ALI program. A multitude of commenters pointed out that the Stage 1 requirement to identify the serving cell site would produce inaccurate and unreliable information and preclude passage to the PSAP of the calling

¹ AT&T Comments at 32-35.

² Ameritech Comments at 8 ("The technologies which will make possible the association of detailed geographic location with a wireless caller are in their technical and commercial infancy").

³ Bell Atlantic Comments at 10 ("It is not clear, however, that any existing technology would permit identification of a caller's location with the degree of accuracy mandated by stage three of the Commission's proposal").

⁴ NYNEX Comments at 14 ("[T]he industry is years away from fully developing, testing and deploying location information technologies, either at the network level or in the handset").

⁵ Pacific Bell Comments at 6 ("Technology does not yet exist to send 3-dimensional information of that level of accuracy [125 meters] in certain environments").

⁶ US West Comments at 14 ("[W]ireless location technologies are not mature and will require additional development and testing").

number, which likely is more useful.⁷ PCIA and a multitude of other parties explained that the Stage 2 requirement to provide more accurate 2-dimensional location information would result in deployment of unreasonably expensive, throw-away technology of little utility to PSAP providers.⁸ Finally, there is broad consensus that the Stage 3 requirements are simply unattainable within five years,⁹ and that the proposed elevation dimension is particularly troubling.¹⁰

Similar problems pervade the other proposed technical requirements. For example, while call priority issues can likely be resolved more rapidly than ALI, implementation of a priority system will require longer than a year because of the need for network equipment upgrades.¹¹ Moreover, priority raises difficult policy issues, including the fact that other government agencies have requested a multi-level prioritization scheme that is inconsistent with the Commission's proposals.¹² Consequently,

⁷ See, e.g., AT&T Comments at 30-25; GTE Comments at 16-18; Northern Telecom Comments at 46-51.

⁸ See, e.g., Ericsson Comments at 7-8; Motorola Comments at 14; GTE Comments at 18-20; Southwestern Bell Comments at 16-17.

⁹ See, e.g., BellSouth Comments at 14-16; Motorola Comments at 15-16; Southwestern Bell Comments at 17-19.

¹⁰ See, e.g., AT&T Comments at 32-33; Terrapin Comments at 3-5.

¹¹ See, e.g., AT&T Comments at 26-27; Bell Atlantic Comments at 9-11; CTIA Comments at 13-14; Ericsson Comments at 5; Motorola Comments at 23; Northern Telecom Comments at 54-55.

¹² Secretary of Defense Comments at 3-8.

there is simply no technological basis for the vast majority of the wireless compatibility proposals.

B. The Proponents of Regulatory Intervention
Fail To Demonstrate that Compatibility Is
Readily Achievable.

Several public safety organizations assert that the technology to support compatibility is available or readily achievable. For example, APCO, NENA, and NASNA claimed that the JEM and Driscoll Reports demonstrate that there are numerous location technologies available that can be deployed now or in the near future."¹³ In addition, New Jersey, after field testing the GPS-based RALI locator technology,¹⁴ asserted that this technology can be commercially implemented in the next four years to meet the FCC's 125 meter resolution requirement.¹⁵ Texas,¹⁶ California,¹⁷ and Oregon¹⁸ all supported the Commission's proposed ALI implementation timetable without identifying

¹³ APCO/NENA/NASNA Comments at 41. These parties further request that the final ALI resolution be increased to 10 meters "in the future." Id. at 42.

¹⁴ See Smith Advanced Technology Comments (the inventor of RALI).

¹⁵ State of New Jersey Comments at 14-16. However, New Jersey itself admits that this RALI technology has not been tested with either hand-held communications devices (cellular or PCS) or with automobile-mounted cellular devices that do not have roof top antennas. Id. at 16.

¹⁶ Texas Advisory Commission On State Emergency Communications Comments at 10.

¹⁷ People of the State of California Comments at 6.

¹⁸ Oregon State Police Comments at 5.

technologies that can be utilized to meet this ambitious schedule.

These speculative arguments cannot overcome the reality that existing location technologies are incapable of effectively and accurately meeting the proposed location requirements. The JEM Report explicitly states that location technologies are "not mature," that no integrated solutions are evident today, and that implementation must be an evolutionary process.¹⁹ Moreover, numerous parties explained that the Driscoll Report is at best a survey of potential technologies, each of which currently has disqualifying faults. For example, BellSouth,²⁰ GTE,²¹ Motorola,²² and AT&T all pointed out that none of the systems referenced in the Notice has been commercially deployed, and none of the vendor claims has been field-tested.²³ Similarly, Redcom Laboratories notes that most of the proposed location

¹⁹ JEM Report at §§ B.3.2, B.3.6, B.3.8.

²⁰ BellSouth Comments at 15 n.22 ("[n]one of the eighteen location technologies identified by the [Driscoll] study have been developed commercially for providing wireless emergency service location information, and many of these technologies are in the developmental stage").

²¹ GTE Comments at 22 ("[a] close inspection of the Driscoll Report would seem to indicate that there is a great deal of uncertainty regarding whether the systems surveyed will be capable of delivering location information by a time certain in the future").

²² Motorola Comments at 15 ("it would be factually incorrect to assume, based on the Driscoll survey, that there is currently available a variety of tested location technologies which would function in a mobile environment").

²³ AT&T Comments at 32.

technologies will be ineffective in buildings or tunnels, where repeaters are required in order to allow a communications signal to penetrate or escape.²⁴ Several other commenters specifically noted the severe design, cost, and technical limitations of GPS-based technologies, which underlie most of the public safety community's claim that compatibility can be achieved in the near future.²⁵ These comments plainly demonstrate that there is no current technology that reasonably can be expected to permit achievement of the proposed compatibility compliance deadlines.

C. The Commission Should Refer Technical Issues To a Joint Industry/Public Safety Experts Group.

The need to resolve complex technical issues and coordinate among a multitude of affected interests counsels in favor of referring compatibility issues to an industry forum, rather than mandating unachievable and inflexible regulatory requirements. In this regard, numerous parties joined PCIA in suggesting that the Commission endorse an industry-driven process for developing robust, workable standards and technology. For example, Bell Atlantic and GTE asked the Commission to permit the members of the wireless industry to continue their joint efforts towards developing and implementing the features called for in the Notice, and to require the industry to brief the Commission on a

²⁴ Redcom Laboratories Comments at ¶ 51.

²⁵ See, e.g., AT&T Comments at 33; Elert Comments at

regular basis.²⁶ BellSouth and NYNEX similarly suggested that all affected entities meet and develop ALI standards cooperatively,²⁷ and Northern Telecom requested that a negotiated rulemaking be commenced in order to develop uniform and non-proprietary standards.²⁸

These suggestions have evident merit, although PCIA urges the Commission to minimize the formal procedural requirements imposed on the entity chosen to address compatibility issues. In this regard, PCIA believes that an industry-driven process, unhindered by the constraints imposed on federal advisory and negotiated rulemaking committees, would be the most flexible, expert, and responsible means of seeking to expedite wireless/E911 compatibility. To this end, PCIA suggests establishment of a Joint Coordinating Function, as described in Diagram 1. Such a function would integrate representatives from the wireless industry, the manufacturing sector, and the public safety community in a collaborative, committed process that could build on the work of the JEM.

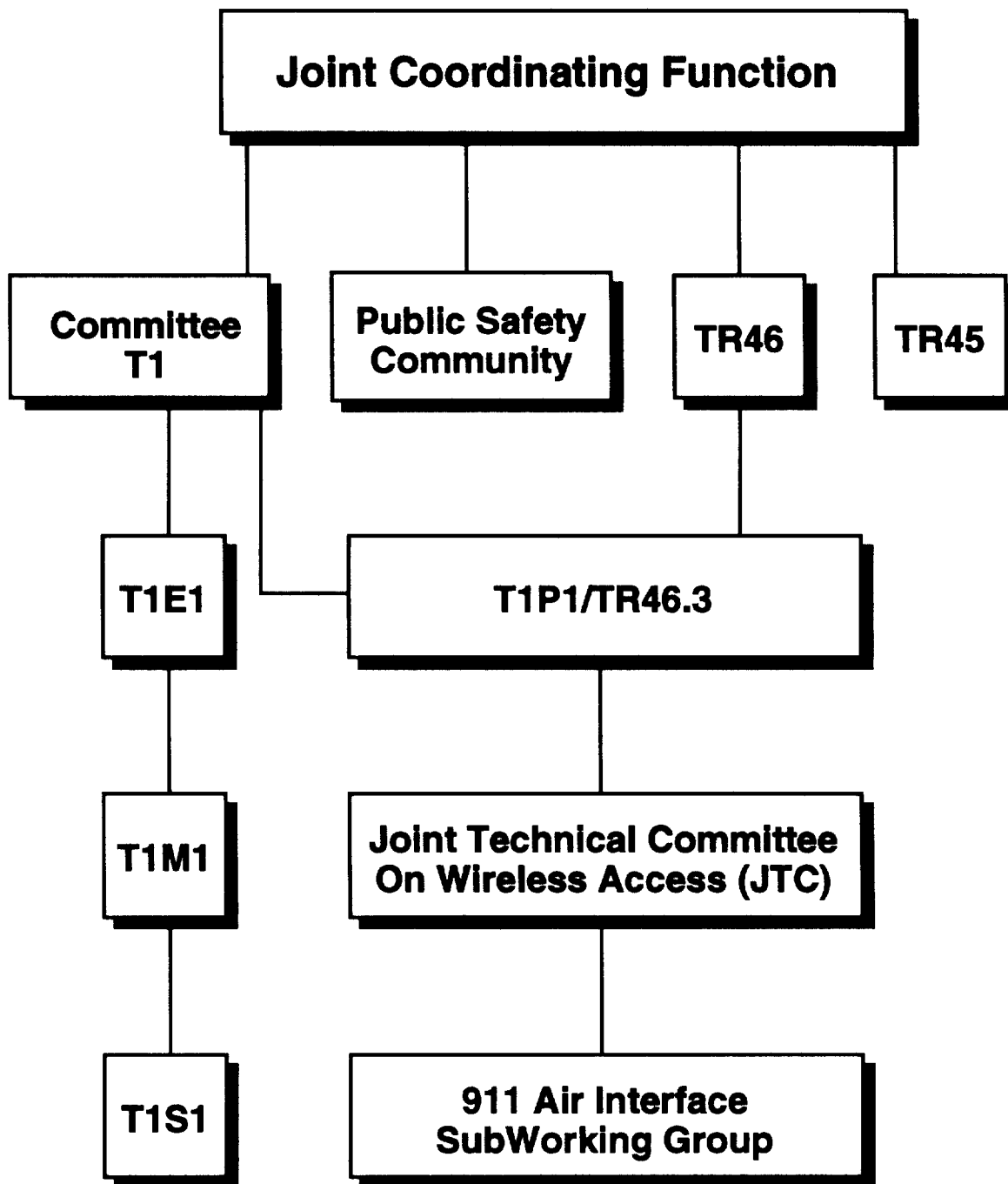
PCIA recognizes that this process likely will result in implementation of compatibility-related technologies after the dates proposed in the Notice. Nonetheless, the joint approach will produce far more robust, flexible, and cost-effective

²⁶ Bell Atlantic Comments at 11; GTE Comments at 23-24.

²⁷ BellSouth Comments at 16; NYNEX Comments at 3.

²⁸ Northern Telecom Comments at 46-48.

Diagram 1



technology than could be patched together in response to unrealistic, rigid regulatory mandates. Consequently, the industry-driven alternative will better serve the emergency service community and 911 users.

III. THE COMMISSION SHOULD ADDRESS FUNDING, PREEMPTION AND LIABILITY ISSUES CONCURRENTLY WITH INDUSTRY RESOLUTION OF TECHNICAL ISSUES

As explained above, industry bodies have the flexibility, commitment, and expertise to resolve the complex technology issues associated with wireless/E911 compatibility in a cost-effective, responsive manner. Compatibility also raises significant policy issues, however, including cost recovery, assurance of consistent nationwide requirements, and immunization of wireless service providers from liability. These matters are uniquely within the Commission's expertise. Accordingly, as discussed below, the Commission should develop a rational policy framework for wireless/E911 compatibility while industry processes address and overcome the technical challenges.

Funding. In its opening comments, PCIA explained that providing ALI and priority calling capabilities and other elements of E911 compatibility will engender substantial costs, and also noted that the wireless industry must not be saddled with the costs of upgrading LEC and PSAP facilities to promote compatibility. PCIA therefore asked the Commission to develop an equitable method by which wireless providers can recover the costs they incur in providing access to E911 service. The record

contains substantial support for this position. For example, AT&T requested that the Commission and the states develop a cooperative funding mechanism,²⁹ and Bell Atlantic emphasized that a competitively neutral compensation scheme must be instituted.³⁰ More generally, GTE correctly pointed out that the Commission must consider the cost of implementing wireless E911 prior to mandating the provision of these services.³¹ PCIA therefore urges the Commission to initiate a proceeding to develop an equitable, rational funding mechanism, which should be in place before specific compatibility obligations are imposed on wireless service providers.

Preemption. There is almost universal agreement that preemption of state and local compatibility requirements is needed to assure nationwide compatibility of E911 technologies and guarantee roamers access to emergency services.³² For example, Redcom Laboratories commented that a multiplicity of standards at the state level would result in undue hardship on manufacturers,³³ and both APCO/NENA/NASNA³⁴ and Southwestern Bell³⁵ explained that federal preemption is essential to allow

²⁹ AT&T Comments at 43.

³⁰ Bell Atlantic Comments at 12.

³¹ GTE Comments at 31-32.

³² Notice at ¶ 59.

³³ Redcom Laboratories Comments at 19.

³⁴ APCO/NENA/NASNA Comments at 52, 54.

³⁵ Southwestern Bell Comments at 26-27.

ubiquitous compatibility.³⁶ Notably, even the California PUC, normally an ardent opponent of preemption, recognized the need for federal supremacy in order to assure nationwide emergency service for roamers.³⁷

The only parties opposing federal preemption are the state agencies from Oregon and Texas.³⁸ These commenters did not, however, demonstrate that local control over technical matters would advance the public interest, and it plainly would not. If each state or municipality were allowed to prescribe its own technical standards, the resulting discord would wreak havoc on roamers attempting to contact emergency service providers. Such regulatory Balkanization also would force manufacturers to accommodate a multitude of inconsistent technical demands, vastly increasing the price of subscriber equipment.

Liability. The Commission should grant wireless carriers the same liability protection as wireline carriers enjoy in the provision of access to E911 services. As CTIA explained, it is long-settled federal public policy to allow common carriers to limit their liability for negligent acts as a means for promoting carriers' willingness and ability to provide reasonably priced service.³⁹ Wireless carriers uniformly agree that liability

³⁶ See also BellSouth Comments at 20; GTE Comments at 30-31; AT&T Comments at 41-42.

³⁷ California PUC Comments at 6.

³⁸ Oregon State Police Comments at 6; Texas Advisory Commission On State Emergency Communications Comments at 13.

³⁹ CTIA Comments at 20-21.

protection is an essential prerequisite to the provision of wireless E911.⁴⁰ In fact, the only party requesting that the Commission defer promulgating liability rules did so not because it opposes liability protection, but in order to encourage the Commission to take the time necessary to properly address the "unique" issues associated with wireless E911.⁴¹

IV. CONCLUSION

The JEM Report and the overwhelming majority of opening comments confirm the need for an evolutionary and collaborative approach to compatibility, under which all affected industry segments develop performance requirements and design standards, field-test equipment and software, and ultimately deploy viable technology. In contrast, mandating design requirements and imposing arbitrary compliance deadlines would be unrealistic and unwise, and likely would result in the deployment of seriously inferior technology. Accordingly, the Commission should encourage an industry-driven process for resolving compatibility issues. Concurrent with the technical process, the Commission should develop a rational funding mechanism, preempt state

⁴⁰ See AT&T Comments at 40-41; Bell Atlantic Comments at 11; BellSouth Comments at 20; Nextel Communications Comments at 8; Southwestern Bell Comments at 24-25, 27.

⁴¹ Ameritech Comments at 8.

regulation, and adopt rules immunizing wireless service providers from liability.

Respectfully submitted,

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